

about 528 microns. Thorax long and narrow, about 480 microns wide in middle; anterior legs about 704 microns behind head; anterior femora curved, convex above, concave below; their tibiae rather short (about 288 microns), with a single long spur; their tarsi long, the first joint longer than next three together, and strongly curved; hind femora extremely broad and flattened, the summit of the curve about half-way between base and middle; abdomen with a rather long petiole.

Burmese amber, from R. C. J. Swinhoe. In the same slab as the type of *Cryphalites rugosissimus*, and 24.5 mm. from it. Related to *Scleroderma* (?) *quadridentatum*, which may possibly belong to *Apenesia*, but on account of the black abdomen and various structural characters surely not its male.

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## DISTRIBUTIONAL NOTES ON NEW ENGLAND ODONATA.

### PART I.

BY R. HEBER HOWE, JR.,

Thoreau Museum, Concord, Massachusetts.

Since Dr. P. P. Calvert's List was published in October, 1905, the following published corrections and additions have been made:

- Argia apicalis* (Say) Selys recorded from Maine by Dr. Calvert on the authority of Prof. Harvey was expunged by Dr. Calvert following an examination of the Harvey specimens by Mr. Williamson (Ent. News 17: 31. 1906).  
*Argia mæsta putrida* (Hagen) was shown by Mr. E. B. Williamson to be synonymous with *Argia mæsta* Hagen (Ent. News 23: 200. 1912.)

In Dr. E. M. Walker's "The North American Dragon-flies of the Genus *Aeshna* (Univ. Toronto Studies, Biol. Series, 1912) the following New England records for the genus were made:

- Aeshna carulea septentrionalis* Burm.  
 N. H. White Mts. (Scudder)  
*Aeshna juncea* Linn.  
 N. H. White Mts. (Scudder)

140. *Æshna interrupta* Walker. New species for New England  
 Me. Portland (*Jones*)  
 Vt. ——— (*Frost*)  
 Mass. ——— (*Uhler*)
141. *Æshna eremita* Scudd. New species for New England  
 Me. Six Ponds, Piscataquis Co. (*Harvey*)  
 N. H. Franconia (*Slosson*)  
 Hermit Lake, Mt. Washington (*Scudder*)
- Æshna clepsydra* Say  
 Me. Manchester (*Wadsworth*)  
 Mass. Brookline (*Shurtleff*)  
 Provincetown (*Benedict*)  
 Wilbrahim (*Hagen*)  
 Boston (*Uhler*)  
 Salem (*True*)  
 Natick (*Saunborn*)
142. *Æshna canadensis* Walker. New species for New England  
 Me. Bradley (*Harvey*)  
 Manchester (*Wadsworth*)  
 Norway (*Smith*)  
 Orono (*Harvey*)  
 N. H. White Mts. (*Shurtleff*)  
 White Mts. House (*Calvert*)  
 Franconia (*Calvert*)  
 Fabyans  
 Vt. Newport (*Slosson*)  
 Mass. ——— (*Needham*)
- Æshna verticalis* Hagen = *A. juncea verticalis* (Hagen) of  
 Dr. Calvert's List  
 Me. Manchester (*Wadsworth*)  
 West Beach (*Hagen*)  
 Mass. Beverly  
 Cambridge  
 Nahant (*Moring*)  
 Salem (*Lane*)  
 Saugus  
 Sherbourne  
 Walpole (*Sprague*)  
 Westborn (*Needham*)  
 Wollaston (*Sprague*)

143. *Eshna tuberculifera* Walker  
 Me. Islesboro (*Dixon*)  
 Manchester (*Wadsworth*)  
 Mass. Walpole (*Sprague*)  
 Essex Co., (*Hagen*)  
 Provincetown (*Benedict*)  
 Hampden (*Needham*)  
 Westborn (*Needham*)
144. *Eshna umbrosa* Walker  
 Me. Manchester (*Wadsworth*)  
 Augusta (*Wadsworth*)  
 Norway (*Smith*)  
 Gorham  
 Millinocket (*Harvey*)  
 Russell Stream (*Corry*)  
 Bradley (*Harvey*)  
 Greenfield (*Harvey*)  
 Six Ponds (*Harvey*)  
 N. H. Franconia (*Slosson*)  
 White Mts. (*Sprague*)  
 Hermit Lake (*Scudder*)  
 Centre Harbor  
 Mass. Boston  
 Cambridge  
 Amherst (*Needham*)  
 Wilbrahim (*Martin*)  
 Auburndale  
 Gor Head = Gay Head
- Eshna constricta* Say  
 Me. Manchester (*Wadsworth*)  
 Mass. Hampden (*Needham*)
145. *Eshna mutata* Hagen  
 Mass. Wilbrahim (*Needham*)

In the Proceedings of the Thoreau Museum of Natural History, I: 41, 1915, Mr. E. L. Peirson recorded the capture of the following species in Concord, Mass., and Dr. Calvert in the Ent. News, 26: 238-239, 1915 again noted Mr. Peirson's capture and added a record of a female taken by Mr. C. W. Johnson at Dedham, Mass.

Mr. E. J. Smith of Sherborn, Mass., kindly permits me to here record the capture of a male, on April 30, 1913, at Sherborn.

146. *Williamsonia lintneri* (Hagen) Davis  
 Mass. Concord (*Peirson*)  
 Dedham (*Calvert*)

In PSYCHE, 23: 12-15, 1916, the author recorded *Æshna umbrosa* and *Æshna canadensis* as new to New England having overlooked Dr. Walker's records. *Libellula luctuosa* Burm., though not uncommon, was added to Dr. Calvert's List.

147. *Libellula luctuosa* Burm.  
 Mass. Concord (*Howe*)

I now wish to record records of a few species sent me from Brandon, Vt., by Mr. D. Lewis Dutton; a small lot from North Guilford, Conn., sent by Mr. Geo. L. Howe; two species from Cataumet, Mass., sent by Miss Theresa Winsor; a summer's catch in New Hampshire made with the continual aid and co-operation of Mr. David M. Little, and a spring and autumn catch at Concord, Mass., made with the help of my daughter, Miss Susan A. Howe, and the Misses Shaw.

- Anax junius* (Drury) Selys. May 27, 1912. New to Vermont  
*Æshna eremita* Scudd. Aug. 31, 1915. New to Vermont  
*Æshna umbrosa* Walker. May 6, 1915. New to Vermont  
*Basiaesha janata* (Say) Selys. May 22, 1912. New to Vermont  
*Plathemis lydia* (Drury) Hagen. July, 1912. New to Vermont  
*Sympetrum rubicundulum* (or var. *obtrusum*), teneral female.  
 July, 1912, in either case new to Vermont

On September 18, 1915, I collected at Bristol and Middletown, R. I., and again at Middletown on June 3, 1916, and at Bristol on October 2, 1916. The following species were taken:

- Lestes rectangularis* Say. Bristol, Sept.  
*Enallagma civile* (Hagen) Selys. Both stations, Sept.  
*Ischnura ramburii* Selys. Both stations, Sept., Oct. 2  
*Anax junius* (Drury) Selys. Middletown, Sept.

- Aeshna tuberculifera* Walker. Bristol, Sept. New to Rhode Island  
*Libellula pulchella* Drury, Middletown, Sept.  
*Plathemis lydia* (Drury) Hagen. Bristol, Sept.  
*Pantala flarescens* (Fab.) Hagen, teneral. Bristol, Sept.  
 New to Rhode Island  
*Sympetrum rubicundulum* (Say) Kirby. Both stations, Sept.  
*Ischnura posita* (Hagen) Needham. Middletown, Sept. and June

The collection from North Guilford, Conn., contained the following:

148. *Celithemis monomelana* Will. July, 1916. New to New England  
*Plathemis lydia* (Drury) Hagen. July, 1916

The two species from Cataumet, Mass., were:

- Erythrodiplax berenice* (Drury) Ris. July, 1916  
*Epicordulia princeps* (Hagen) Selys. July, 1916

I began collecting on Meredith Neck, N. H., on June 29 and visited various collecting grounds on the shores of Lake Winnepesaukee until August 23. These included Centre Harbor, Meredith, Moultonboro (Sanborn's Meadows), and made two trips to Lake Asquam, with one excursion to Newfound and one to Profile Lake. The list of species follows:

- Agrion maculata* Beauv. Meredith Neck, July 27. New to New Hampshire  
*Lestes disjunctus* Selys. Meredith Neck and Moultonboro, Aug. 1-22  
*Lestes rectangularis* Say. Meredith Neck, July 18-Aug. 15  
*Lestes vigilax* Hagen. Meredith Neck and Moultonboro, July 6-Aug. 15. New to New Hampshire  
*Lestes inequalis* Walsh. Meredith Neck and Moultonboro, July 6-Aug. 15  
*Argia maesta* Hagen. Meredith Neck and Moultonboro, July 7-Aug. 23. New to New Hampshire  
*Argia violacea* (Hagen) Selys. Meredith Neck, July 17-Aug. 23. New to New Hampshire

- Nehalennia irene* (Hagen) Selys. Meredith, July 5-24 and Moultonboro
- Enallagma calverti* Morse. Profile Lake, Aug. 12. New to New Hampshire
- Enallagma hageni* (Walsh) Selys. Meredith and Moultonboro, July 2-11. New to New Hampshire
- Enallagma ebrium* (Hagen) Selys. Meredith Neck and Moultonboro, July 5-18
- Enallagma civile* (Hagen) Selys. Lake Asquam, Moultonboro and Meredith Neck, July 23 to Aug. 14. New to New Hampshire
- Enallagma minusculum* Morse. Meredith Neck, Aug. 6-23. New to New Hampshire
- Enallagma traviatum* Selys. Moultonboro, July 18. One female. New to New Hampshire
- Enallagma exsulans* (Hagen) Selys. Meredith Neck, July 17-Aug. 7. New to New Hampshire
- Enallagma signatum* (Hagen) Selys. Meredith Neck and Moultonboro, July 2-Aug. 22. New to New Hampshire
- Enallagma pollutum* (Hagen) Selys. Moultonboro, July 2. New to New Hampshire
- Ischnura verticalis* (Say) Selys. Meredith Neck, Centre Harbor, Moultonboro, July 5-Aug. 22
- Hagenius brevistylus* Selys. Meredith Neck and Moultonboro, July 12-Aug. 22
- Gomphus exilis* Selys. Meredith Neck and Moultonboro, June 30-Aug. 2
- Dromogomphus spinosus* Selys. Meredith Neck, Newfound Lake, Moultonboro, July 20-Aug. 14
- Anax junius* (Drury) Selys. Meredith, July 5-27
- Aeshna verticalis* (Hagen). Meredith Neck, Aug. 7-18
- Aeshna clepsydra* Say. Moultonboro, Aug. 14-27
- Aeshna canadensis* Walker. Moultonboro, Meredith Neck, Jackson, Aug. 2-22
- Aeshna eremita* Scudd. Profile Lake and Moultonboro, Aug. 12-14
- Aeshna umbrosa* Walker. Meredith Neck, Aug. 7-18

149. *Nasiarshna pentacantha* Ramb. Moultonboro, July 9.  
New to New England  
*Basiarshna janata* (Say) Selys. Meredith Neck, July 5-7  
*Boyeria vinosa* (Say) McLachlan. Meredith Neck, July  
25-Aug. 18. New to New Hampshire  
*Didymops transversa* (Say) Hagen. Meredith Neck, July 11  
*Macromia illinoiensis* Walsh. Meredith Neck and Moul-  
tonboro, Aug. 2-7  
*Neurocordulia obsoleta* (Say) Selys. Meredith Neck, July  
27-29. Crepuscular in habit  
*Epicordulia princeps* (Hagen) Selys. Concord and Mere-  
dith Neck, June 29-Aug. 2. New to New Hampshire  
*Tetragoneuria cynosura simulans* Mutt. = *T. c. semiaqua*  
(Burm) of Dr. Calvert's List. Meredith Neck and  
Moultonboro, July 2-20  
*Tetragoneuria spinigera* (Selys) Selys. Meredith Neck,  
June 29-July 11
150. *Tetragoneuria morio* Mutt. Meredith Neck, June 29. New  
to New England  
*Somatochlora elongata* (Scudd.) Selys. Centre Harbor and  
Jackson, July 14-Aug. 12
151. *Somatochlora williamsoni* Walker. Meredith Neck, July  
17. New to New England  
*Cordulia shurtleffi* Scudd. Moultonboro, July 8-18  
*Dorocordulia libera* (Selys) Need. Moultonboro, July 8  
*Libellula exusta* Say. Moultonboro and Meredith Neck,  
July 6-25  
*Libellula pulchella* Drury. Centre Harbor, Meredith Neck,  
Moultonboro, July 5-Aug. 20  
*Libellula quadrimaculata* Linn. Meredith Neck, Moulton-  
boro, Centre Harbor, June 30-July 18  
*Plathemis lydia* (Drury) Hagen. Centre Harbor, July 7  
*Sympetrum rubicundulum* (Say) Kirby. Meredith Neck,  
Centre Harbor, Moultonboro, Profile Lake, July 11-  
Aug. 23  
*Sympetrum rubicundulum obtusum* (Hagen). Meredith  
Neck and Centre Harbor, July 5-7  
*Sympetrum vicinum* (Hagen) Kirby. Meredith Neck and  
Jackson, Aug. 12-14

- Leucorhinia frigida* Hagen. Moultonboro, July 6–Aug. 14  
*Leucorhinia glacialis* Hagen. Moultonboro, July 6–9  
*Leucorhinia intacta* (Hagen) Hagen. Meredith Neck, and  
 Moultonboro, Centre Harbor, June 30–July 27  
*Celithemis elisa* (Hagen) Walsh. Moultonboro, July 18–  
 Aug. 14. This species was also captured at Tyngs-  
 boro, Mass., on June 29.

I began collecting in Concord, Mass., with the first appearance of dragon-fly life and collected until June 28. On August 24 I returned from New Hampshire and collected until the end of the season. During these periods I added the following species to my Preliminary List published in *PSYCHE* (*ibid.*), bringing the number from 52 to 67.

*Lestes uncatus* Kirby. Common, June 27

152. (?) *Argia sedula* Hagen. Two specimens taken on June 2 were of doubtful determination by Mr. Williamson. The species would be new to New England.

*Isonura posita* (Hagen) Need. Male, Sept. 3

*Cordulegaster diastalops* Selys. One female, June 1

*Cordulegaster maculatus* Selys. One male, June 28

*Aeshna tuberculifera* Walker. One male, Sept. 3–6

*Aeshna verticalis* Hagen. Not uncommon, Aug. 15–Oct. 1

*Epicordulia princeps* (Hagen) Selys. Two males, June 23, July 28

*Boyeria vinosa* (Say) MacLachlan. One seen Sept. 13

*Tetragoneuria cynosura* var. *simulans* Mutt. Several, June 23

*Helocordulia uhleri* (Selys) Need. One male, May 29

*Cordulia shurtleffi* Scudd. One female, June 27. New to Massachusetts

*Libellula semifasciata* Burm., teneral. June 23

*Sympetrum rubicundulum* var. *obtrusum* (Hagen). Male, Oct. 5

*Leucorhinia intacta* (Hagen) Hagen. Not uncommon, May 30–June 28

Through the kindness of Mr. C. W. Johnson, Curator, I have examined the collection of Odonata in the Boston Society of Natural History, and can add the following new records:



*Agrion maculata* Beauv. New to Connecticut, Rowayton, and Rhode Island, Apponaug

*Lestes uncatulus* Kirby. New to Connecticut, Darien

*Lestes inequalis* Walsh. New to Massachusetts, Cohasset, Blue Hills, No. Reading, Manomet

*Gomphus parvulus* (Selys) Need. New to Massachusetts, No. Reading and East Walpole

*Cordulegaster maculatus* Selys. New to Vermont, Bennington

*Libellula semifasciata* Burm. New to Connecticut, Darien

*Erythrodiplax berenice* (Drury) Ris. New to Connecticut, Rowayton

*Tramea carolina* (L.) Hagen. New to Connecticut, Darien

153. *Tramea lacerata* Hagen. New to New England, Chelsea, Mass., Sept. 6, 1868, female

*Pachydiplax longipennis* (Burm.) Brauer. New to Connecticut, Darien

All my determinations for the above species have been verified by either Messrs. Ed. B. Williamson, R. A. Muttkowski or E. M. Walker, and to these gentlemen I extend my most hearty thanks.

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#### CYCLOLEPPTERON THEOBALD (DIPTERA: CULICIDAE).

Some new, *i. e.* hitherto unreported localities for the group of Anophelines which Mr. Theobald placed together under the genus *Cyclolepteron* are: San Juan, Jajuga, Carolina, and Coamo Springs, Porto Rico, from which places specimens were sent by Dr. B. H. Dutcher, Lieut.-Colonel, Medical Corps, U. S. Army, during the period Sept. 11, 1914–July 15, 1915, since which time no collections from Porto Rico have been received.

C. S. LUDLOW.

Army Medical Museum,  
Washington, D. C.,  
January 30, 1917.